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EXAMINER	
XAVIER, ANTONIO J	
ART UNIT	PAPER NUMBER
2629	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/584,012	FORD ET AL.	
	Examiner	Art Unit	
	ANTONIO XAVIER	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 September 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 June 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

In light of the recent change in representation, Examiner is providing an updated rejection with further details in response to the concerns raised in the RCE rather than issuing a first action final. Applicant's new representative is strongly encouraged to contact the Examiner if there are any remaining questions regarding the Office Action.

Response to Arguments

1. Applicant's arguments filed September 28, 2010 (hereinafter "Remarks") have been fully considered but they are not persuasive.

On page 11 of the Remarks, Applicant argues "Examiner has failed to indicate which portions of the different screen displays, or which specific sections of Kraft's disclosure, allegedly describe each of the first, second and third portions of the character strip that is recited in the pending claims." Examiner disagrees.

Examiner notes he clearly identified "functional symbols including language dependent characters" for a first portion. Examiner notes he also clearly identified the "word prediction" feature for a second portion. Examiner notes he did not provide further explanation regarding the third portion ("other symbols") because it was self explanatory and easily identifiable in the various character strips that were cited.

Nevertheless, in the interest of compact prosecution, Examiner has clarified the rejections below.

On page 11 of the Remarks, Applicant argues "Examiner has referenced the exact same sections of Kraft's disclosure…to identically reject each of the first, second and third portions of the character strip that is recited in the pending claims." Examiner disagrees.

Examiner notes that the citations for the second portion were clearly not identical to the first and third portions. The unique subject matter cited for the second portion was clearly directed to word prediction and suggested characters (Col. 9, line 33-Col. 10, line 34) and foreign language functionality (Col. 13, line 12-Col. 14, line 38).

Nevertheless, in the interest of compact prosecution, Examiner has clarified the rejections below.

On pages 11-13 Applicant argues Kraft fails to teach functional icons. Examiner is not persuaded.

In response to Applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Examiner notes the claims were rejected in light of Kraft at least in view of Official notice regarding icons.

2. Applicant's remaining arguments have been fully considered but they are not persuasive. Furthermore, the common knowledge or well-known in the art statements presented in the prior office action are now taken to be admitted prior art because Applicant either failed to traverse the Examiner's assertion of official notice or the traversal was inadequate, as discussed above.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kraft et al. (U.S. Pat. No.: 6,487,424).

With respect to Claim 1, Kraft teaches a method for enabling a user to enter data into an electronic device, the method comprising:

determining one or more characters as being likely to be selected next by the user (Figs. 4 and 6-7, Abstract and Col. 9, line 33-Col. 12, line 12 and Col. 13, line 12-Col. 14, line 38 teach predictive text for English and foreign language inputs) and;

displaying a character strip on a display screen of the electronic device (Figs. 3-7, Abstract and Col. 5, lines 29-41, Col. 5, line 66-Col. 6, line 13, Col. 7, lines 15-57 and Col. 10, lines 12-34 teach various character strips), the character strip comprising three portions:

a first portion comprising functional symbols (Figs. 3-7, Abstract and Col. 7, lines 15-57, Col. 10, lines 12-34 and Col. 13, line 12-Col. 14, line 38. **Examiner notes Col. 10, lines 31-32 teach an exemplary character strip including a first portion with language dependent characters. Col. 7, lines 29-57 teach language dependent characters and special characters that are language dependent. Examiner notes there is also an option to enter a special character mode including, but not limited to, Greek letters. A reasonably broad interpretation of a functional symbol includes an item in a character strip to change the language. Examiner further notes Col. 6, lines 18-21 teach the character strip may include special functions**),

a second portion comprising the one or more characters as suggested next characters (Figs. 3-7, Abstract and Col. 9, line 33-Col. 10, line 34 and Col. 13, line 12-Col. 14, line 38. **Examiner notes Col. 10, lines 31-32 teach an exemplary character strip including a second portion with most probable characters**), and

a third portion comprising a plurality of other symbols (Figs. 3-7, Abstract and Col. 7, lines 15-57, Col. 10, lines 12-34 and Col. 13, line 12-Col. 14, line 38. **Examiner**

notes Col. 10, lines 31-32 teach an exemplary character strip including a third portion with other symbols including, but not limited to, characters, numbers and special symbols),

wherein the one or more characters in the second portion and the plurality of other symbols in the third portion are determined and displayed based on a selected functional symbol in the first portion (Figs. 3-7, Abstract and Col. 5, lines 29-41, Col. 5, line 66-Col. 6, line 13, Col. 7, lines 15-57 and Col. 10, lines 12-34 teach word prediction including foreign languages. Examiner notes the predicted characters and special symbols are language dependent);

scrolling through the functional symbols, the suggested next characters and a plurality of other symbols in the character strip (Figs. 3-7, Abstract and Col. 5, lines 29-41, Col. 5, line 66-Col. 6, line 13, Col. 7, lines 15-57 and Col. 10, lines 12-34 teach scrolling through various character strips including functional icons, predictive text and symbols); and

selecting one or more of the suggested next characters or one or more of the other symbols as data to be entered into the electronic device, or alternatively selecting one of the functional symbols to change the suggested next characters and the plurality of other characters displayed in the second and third portions of the character strip (Figs. 3-7, Abstract and Col. 5, lines 29-41, Col. 5, line 66-Col. 6, line 13, Col. 7, lines 15-57 and Col. 10, lines 12-34 teach both the selection of predictive text as well as changing the language dependent predictive text and symbols).

However, Kraft fails to expressly teach wherein the functional symbols are icons (emphasis added) (Examiner notes Fig. 3, item 24 and Col. 6, lines 30-36 teach icons are used to represent other information).

Examiner takes official notice that icons and functional icons are well known in the art. It would have been obvious for one of ordinary skill in the art to substitute a functional icon for the functional symbols of Kraft. One would be motivated to make this change of user interface representation because both symbols and icons were known in the art and the results of the substitution of one for the other would have been predictable.

With respect to Claim 2, Kraft teaches a method according to claim 1, discussed above, wherein the one or more characters or symbols selected by the user are displayed on the display screen (Figs. 3-7, Abstract and Col. 5, lines 29-41, Col. 5, line 66-Col. 6, line 13, Col. 7, lines 15-57 and Col. 10, lines 12-34 teach displaying the character selected by the user).

With respect to Claim 3, Kraft teaches a method according to claim 1, discussed above, wherein the determining comprises predicting which characters are statistically the most likely to be selected next by the user (Fig. 4, Abstract and Col. 9, line 33-Col. 12, line 12 teach probability lists for predictive text).

With respect to Claim 4, Kraft teaches a method according to claim 1, discussed above, wherein the plurality of other symbols are adapted to perform a function on selection by the user (Figs. 3-7, Abstract and Col. 5, lines 29-41, Col. 5, line 66-Col. 6, line 13, Col. 7, lines 15-57 and Col. 10, lines 12-34 teach various character strips with symbols adapted to perform a function).

However, Kraft fails to expressly teach wherein the plurality of other symbols includes one or more icons which are adapted to perform a function on selection by a user (Examiner notes he is interpreting the limitation "icon" as a more specific form of "symbol" with regards to user interfaces. Specifically, the limitation "icon" requires some type of graphical symbol/representation) (emphasis added).

Examiner takes official notice that icons are well known in the art. It would have been obvious for one of ordinary skill in the art to substitute an icon for the symbols adapted to perform a function on selection of Kraft. One would be motivated to make this change of user interface representation because both symbols and icons were known in the art and the results of the substitution of one for the other would have been predictable.

With respect to Claim 5, Kraft teaches a method according to claim 1, discussed above, wherein the scrolling and selecting are carried out on a handheld electronic device comprising a scrolling mechanism and a selection mechanism, wherein the scrolling mechanism and the selection mechanism are provided by a cylindrical input mechanism, and scrolling can be achieved by rotating the input mechanism about its

axis and selection can be achieved by pushing the input mechanism (Fig. 1, item 9, Col. 4, lines 37-53 and Col. 6, lines 18-29 teach a roller key input).

However, Kraft fails to expressly teach selection can be achieved by pushing the input mechanism along its axis (emphasis added).

Examiner takes official notice that cylindrical input devices that rotate about their axis and provide a selection input when pushed along its axis downwards towards the housing are well known in the art (hereinafter referred to as a "rotary input device"). It would have been obvious for one of ordinary skill in the art to substitute a rotary input device for the roller of Kraft in view of Official Notice providing the user with a cylindrical input mechanism that performs section when pushed along its axis. One would be motivated to make this change of input device because both input devices were known in the art and the results of the substitution of one for the other would have been predictable.

With respect to Claim 6, Kraft teaches a method according to claim 1, discussed above. However, Kraft fails to expressly teach wherein the plurality of other symbols comprises characters grouped as on an ITU-T keypad (emphasis added).

Examiner takes official notice that ITU-T keypad layouts are well known in the art. It would have been obvious to one of ordinary skill in the art to substitute the symbol and character groupings of an ITU-T keypad for the character strip list of Kraft. One would be motivated to make this change of interface layout because both layouts/groupings were known in the art and the results of the substitution of one for the

other would have been predictable. Furthermore, Examiner notes that Kraft suggests supplementing or succeeding known cellular phone alpha entry concepts (Col. 5, lines 42-48).

With respect to Claim 7 Kraft teaches an electronic device, comprising:

means for determining one or more characters as being likely to be selected next by a user when the electronic device is in a data entry mode (Figs. 4 and 6-7, Abstract and Col. 9, line 33-Col. 12, line 12 and Col. 13, line 12-Col. 14, line 38 teach a text prediction system);

a display screen for displaying a character strip as suggested next characters, the character strip comprising three portions (Figs. 3-7, Abstract and Col. 5, lines 29-41, Col. 5, line 66-Col. 6, line 13, Col. 7, lines 15-57 and Col. 10, lines 12-34 teach various character strips displayed on a screen):

a first portion comprising functional symbols (Figs. 3-7, Abstract and Col. 7, lines 15-57, Col. 10, lines 12-34 and Col. 13, line 12-Col. 14, line 38. **Examiner notes Col. 10, lines 31-32 teach an exemplary character strip including a first portion with language dependent characters. Col. 7, lines 29-57 teach language dependent characters and special characters that are language dependent. Examiner notes there is also an option to enter a special character mode including, but not limited to, Greek letters. A reasonably broad interpretation of a functional symbol includes an item in a character strip to change the language. Examiner further notes Col. 6, lines 18-21 teach the character strip may include special functions**),

a second portion comprising the one or more characters as suggested next characters (Figs. 3-7, Abstract and Col. 9, line 33-Col. 10, line 34 and Col. 13, line 12-Col. 14, line 38. **Examiner notes Col. 10, lines 31-32 teach an exemplary character strip including a second portion with most probable characters**), and

a third portion comprising a plurality of other symbols (Figs. 3-7, Abstract and Col. 7, lines 15-57, Col. 10, lines 12-34 and Col. 13, line 12-Col. 14, line 38. **Examiner notes Col. 10, lines 31-32 teach an exemplary character strip including a third portion with other symbols including, but not limited to, characters, numbers and special symbols**),

wherein the one or more characters in the second portion and the plurality of other symbols in the third portion are determined and displayed based on a selected functional icon in the first portion (Figs. 3-7, Abstract and Col. 5, lines 29-41, Col. 5, line 66-Col. 6, line 13, Col. 7, lines 15-57 and Col. 10, lines 12-34 teach word prediction including foreign languages. Examiner notes the predicted characters and special symbols are language dependent);

scrolling through the functional symbols, the suggested next characters and a plurality of other symbols in the character strip (Figs. 3-7, Abstract and Col. 5, lines 29-41, Col. 5, line 66-Col. 6, line 13, Col. 7, lines 15-57 and Col. 10, lines 12-34 teach scrolling through various character strips including functional symbols, predictive text and symbols); and

selecting one or more of the suggested next characters or alternatively one or more other symbols, as data to be entered into the electronic device, or alternatively for

selecting one of the functional symbols to change the suggested next characters and the plurality of other characters displayed in the second and third portions of the character strip (Figs. 3-7, Abstract and Col. 5, lines 29-41, Col. 5, line 66-Col. 6, line 13, Col. 7, lines 15-57 and Col. 10, lines 12-34 teach both the selection of predictive text as well as changing the language dependent predictive text and symbols).

However, Kraft fails to expressly teach wherein the functional symbols are icons (emphasis added) (Examiner notes Fig. 3, item 24 and Col. 6, lines 30-36 teach icons are used to represent other information).

Examiner takes official notice that icons are well known in the art. It would have been obvious for one of ordinary skill in the art to substitute an icon for the functional symbols of Kraft. One would be motivated to make this change of user interface representation because both symbols and icons were known in the art and the results of the substitution of one for the other would have been predictable.

Kraft in view of official notice teaches a character strip including functional icons. However, Kraft fails to expressly teach the specific means for scrolling and selecting described in the specification as filed (emphasis added). Specifically, Kraft fails to describe a rotary mechanism that can be pressed downwards, in the direction towards the handset by pushing along its axis (Examiner notes the specific structure described in Figs. 2A-2B of the specification as filed can be distinguished from the roller key taught by Kraft).

Examiner takes official notice that cylindrical input devices that rotate about their axis and provide a selection input when pushed along its axis downwards towards the

housing are well known in the art (hereinafter referred to as a "rotary input device"). It would have been obvious for one of ordinary skill in the art to substitute a rotary input device for the roller of Kraft providing the user with a cylindrical input mechanism that performs section when pushed along its axis. One would be motivated to make this change of input device because both input devices were known in the art and the results of the substitution of one for the other would have been predictable.

The further limitations of Claims 8-12 are rejected for substantially the same reasons as Claims 2-6, discussed above.

5. Claims 13-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kraft et al. (U.S. Pat. No.: 6,487,424) in view of Will (U.S. Pat. No.: 6,392,640).

With respect to Claim 13, Kraft teaches a method of entering data into an electronic device, comprising:

scrolling through a plurality of symbols on a character strip, the character strip comprising three portions (Figs. 3-7, Abstract and Col. 5, lines 29-41, Col. 5, line 66-Col. 6, line 13, Col. 7, lines 15-57 and Col. 10, lines 12-34 teach scrolling through various character strips including functional icons, predictive text and symbols):

a first portion comprising functional symbols (Figs. 3-7, Abstract and Col. 7, lines 15-57, Col. 10, lines 12-34 and Col. 13, line 12-Col. 14, line 38. **Examiner notes Col.**

10, lines 31-32 teach an exemplary character strip including a first portion with language dependent characters. Col. 7, lines 29-57 teach language dependent characters and special characters that are language dependent. Examiner notes there is also an option to enter a special character mode including, but not limited to, Greek letters. A reasonably broad interpretation of a functional symbol includes an item in a character strip to change the language. Examiner further notes Col. 6, lines 18-21 teach the character strip may include special functions),

a second portion (Figs. 3-7, Abstract and Col. 7, lines 22-23, Col. 9, line 33-Col. 10, line 34 and Col. 13, line 12-Col. 14, line 38) comprising, for a first symbol to be entered by a user, the plurality of symbols (Examiner notes Col. 7, lines 22-23 teach an exemplary character strip with a second portion comprising a plurality of symbols. Col. 9, line 66-Col. 10, line 11 teach the first input does not include suggested next symbols) and, for a second symbol to be entered following entry of the first symbol by the user, at least one suggested next symbol (Examiner notes Col. 10, lines 31-32 teach an exemplary character strip including a second portion with most probable characters), and

a third portion comprising a plurality of other symbols (Figs. 3-7, Abstract and Col. 7, lines 15-57, Col. 10, lines 12-34 and Col. 13, line 12-Col. 14, line 38. **Examiner notes Col. 10, lines 31-32 teach an exemplary character strip including a third portion with other symbols including, but not limited to, characters, numbers and special symbols**),

wherein the second portion and the plurality of other symbols in the third portion are determined and displayed based on a selected functional symbol in the first portion (Figs. 3-7, Abstract and Col. 5, lines 29-41, Col. 5, line 66-Col. 6, line 13, Col. 7, lines 15-57 and Col. 10, lines 12-34 teach word prediction including foreign languages. Examiner notes the predicted characters and special symbols are language dependent); and

selecting a symbol (Figs. 3-7, Abstract and Col. 5, lines 29-41, Col. 5, line 66-Col. 6, line 13, Col. 7, lines 15-57 and Col. 10, lines 12-34 teach selecting a symbol); and

processing the selected symbol as an entered symbol (Figs. 3-7, Abstract and Col. 5, lines 29-41, Col. 5, line 66-Col. 6, line 13, Col. 7, lines 15-57 and Col. 10, lines 12-34 teach processing the selected symbol).

However, Kraft fails to expressly teach wherein the functional symbols are icons (emphasis added) (Examiner notes Fig. 3, item 24 and Col. 6, lines 30-36 teach icons are used to represent other information).

Examiner takes official notice that icons and functional icons are well known in the art. It would have been obvious for one of ordinary skill in the art to substitute a functional icon for the functional symbols of Kraft. One would be motivated to make this change of user interface representation because both symbols and icons were known in the art and the results of the substitution of one for the other would have been predictable.

Kraft in view of Official Notice teaches predictive text input including a character strip with functional icons. However, Kraft fails to expressly teach selecting a grouping of symbols/characters. Specifically, Kraft fails to expressly teach scrolling through a plurality of groups of symbols on a character strip, the symbols comprising characters grouped as on an ITU-T keypad, so as to indicate one of the groups, the character strip comprising three portions: a first portion comprising functional icons, a second portion comprising, for a first symbol to be entered by a user, the plurality of groups of symbols and, for a second symbol to be entered following entry of the first symbol of the user, at least one suggested next symbol, and a third portion comprising a plurality of other groups and symbols, wherein the plurality of the groups in the second portion and the plurality of other groups and symbols in the third portion are determined and displayed based on a selected functional icon in the first portion; selecting an indicated group of symbols; selecting one of the symbols of the selected group as data to be entered into the device; and processing the selected symbol as an entered symbol (emphasis added).

Will teaches predictive text input including disambiguation for grouped symbols/characters. Specifically, Will teaches scrolling through a plurality of groups of symbols, so as to indicate one of the groups (Figs. 1A-1C, 4A-7B, 10A-10B and 12A-15 and Col. 2, lines 59-64 and Col. 5, line 65-Col. 7, line 20); selecting an indicated group of symbols (Figs. 1A-1C, 4A-7B, 10A-10B and 12A-15 and Col. 5, line 65-Col. 7, line 20); selecting one of the symbols of the selected group as data to be entered into the device (Figs. 14A-15 and Col. 14, line 1-Col. 15, line 62 teach disambiguation of a

previously selected character group); and processing the selected symbol as an entered symbol (Figs. 14A-15. Although Will fails to expressly teach processing the selected symbol as an entered symbol, Examiner notes the processing is inherently performed in a system asking the for specific disambiguation input). It would have been obvious to one of ordinary skill in the art to modify the character strip including functional icons of Kraft in view of Official Notice to include the symbol/character groupings of Will to increase the speed and efficiency of the input by reducing the amount of items in a scrollable menu (Will, Abstract and Col. 1, lines 62-65).

Kraft in view of Will teaches predictive text input including a character strip with functional icons and symbol/character groupings. However, Kraft in view of Will fails to expressly teach the symbols/characters grouped as on an ITU-T keypad (emphasis added).

Examiner takes official notice that ITU-T keypad layouts are well known in the art. It would have been obvious to one of ordinary skill in the art to substitute the symbol and character groupings of an ITU-T keypad for the symbol/character groups of Kraft in view of Will. One would be motivated to make this change of interface layout because both layouts/groupings were known in the art and the results of the substitution of one for the other would have been predictable. Furthermore, Examiner notes that Will expressly suggests alternative groupings are possible, including those taught by standard telephone keypads (Col. 10, lines 11-12).

With respect to Claim 14, Kraft in view of Will teaches a method according to claim 13, discussed above, wherein the selected symbol is selected from the selected group by the selection mechanism (Will, Figs. 14A-15, Col. 5, line 65-Col. 7, line 8 and Col. 14, lines 20-30 teach the disambiguated symbol is selected by the user. Official notice teaches a rotary input device).

With respect to Claim 15, Kraft in view of Will teaches a method according to claim 13, discussed above, wherein the selected symbol is selected from the selected group by a character prediction engine (Will, Figs. 14A-15 and Col. 14, line 1-Col. 15, line 62 teach disambiguation of a previously selected character group. Examiner notes the character disambiguation is performed by the text prediction engine).

The further limitations of Claims 16-17 are rejected for substantially the same reasons as Claims 4-5, discussed above.

With respect to Claim 18, Kraft teaches an electronic device, comprising

scrolling through a plurality of symbols on a character strip, the character strip comprising three portions (Figs. 3-7, Abstract and Col. 5, lines 29-41, Col. 5, line 66-Col. 6, line 13, Col. 7, lines 15-57 and Col. 10, lines 12-34 teach scrolling through various character strips including functional icons, predictive text and symbols):

a first portion comprising functional symbols (Figs. 3-7, Abstract and Col. 7, lines 15-57, Col. 10, lines 12-34 and Col. 13, line 12-Col. 14, line 38. **Examiner notes Col.**

10, lines 31-32 teach an exemplary character strip including a first portion with language dependent characters. Col. 7, lines 29-57 teach language dependent characters and special characters that are language dependent. Examiner notes there is also an option to enter a special character mode including, but not limited to, Greek letters. A reasonably broad interpretation of a functional symbol includes an item in a character strip to change the language. Examiner further notes Col. 6, lines 18-21 teach the character strip may include special functions),

a second portion (Figs. 3-7, Abstract and Col. 7, lines 22-23, Col. 9, line 33-Col. 10, line 34 and Col. 13, line 12-Col. 14, line 38) comprising, for a first symbol to be entered by a user, the plurality of symbols (Examiner notes Col. 7, lines 22-23 teach an exemplary character strip with a second portion comprising a plurality of symbols. Col. 9, line 66-Col. 10, line 11 teach the first input does not include suggested next symbols) and, for a second symbol to be entered following entry of the first symbol by the user, at least one suggested next symbol (Examiner notes Col. 10, lines 31-32 teach an exemplary character strip including a second portion with most probable characters), and

a third portion comprising a plurality of other symbols (Figs. 3-7, Abstract and Col. 7, lines 15-57, Col. 10, lines 12-34 and Col. 13, line 12-Col. 14, line 38. **Examiner notes Col. 10, lines 31-32 teach an exemplary character strip including a third portion with other symbols including, but not limited to, characters, numbers and special symbols**),

wherein the second portion and the plurality of other symbols in the third portion are determined and displayed based on a selected functional symbol in the first portion (Figs. 3-7, Abstract and Col. 5, lines 29-41, Col. 5, line 66-Col. 6, line 13, Col. 7, lines 15-57 and Col. 10, lines 12-34 teach word prediction including foreign languages. Examiner notes the predicted characters and special symbols are language dependent); and

selecting the symbol (Figs. 3-7, Abstract and Col. 5, lines 29-41, Col. 5, line 66-Col. 6, line 13, Col. 7, lines 15-57 and Col. 10, lines 12-34 teach selecting the symbol); and

processing the selected symbol as an entered symbol (Figs. 3-7, Abstract and Col. 5, lines 29-41, Col. 5, line 66-Col. 6, line 13, Col. 7, lines 15-57 and Col. 10, lines 12-34 teach processing the selected symbol).

However, Kraft fails to expressly teach wherein the functional symbols are icons (emphasis added) (Examiner notes Fig. 3, item 24 and Col. 6, lines 30-36 teach icons are used to represent other information).

Examiner takes official notice that icons and functional icons are well known in the art. It would have been obvious for one of ordinary skill in the art to substitute a functional icon for the functional symbols of Kraft. One would be motivated to make this change of user interface representation because both symbols and icons were known in the art and the results of the substitution of one for the other would have been predictable.

Kraft in view of Official Notice teaches a character strip including functional icons. However, Kraft in view of Official Notice fails to expressly teach the specific means for scrolling and selecting described in the specification as filed (emphasis added). Specifically, Kraft fails to describe a rotary mechanism that can be pressed downwards, in the direction towards the handset by pushing along its axis (Examiner notes the specific structure described in Figs. 2A-2B of the specification as filed can be distinguished from the roller key taught by Kraft).

Examiner takes official notice that cylindrical input devices that rotate about their axis and provide a selection input when pushed along its axis downwards towards the housing are well known in the art (hereinafter referred to as a "rotary input device"). It would have been obvious for one of ordinary skill in the art to substitute a rotary input device for the roller of Kraft providing the user with a cylindrical input mechanism that performs section when pushed along its axis. One would be motivated to make this change of input device because both input devices were known in the art and the results of the substitution of one for the other would have been predictable.

Kraft in view of Official Notice teaches predictive text input including a character strip with functional icons and a rotary input device. However, Kraft fails to expressly teach selecting a grouping of symbols/characters. Specifically, Kraft fails to expressly teach scrolling through a plurality of groups of symbols on a character strip, the symbols comprising characters grouped as on an ITU-T keypad, so as to indicate one of the groups, the character strip comprising three portions: a first portion comprising functional icons, a second portion comprising, for a first symbol to be entered by a user,

the plurality of groups of symbols and, for a second symbol to be entered following entry of the first symbol by the user, at least one suggested next symbol, and a third portion comprising a plurality of other groups and symbols, wherein the plurality of the groups in the second portion and the plurality of other groups and symbols in the third portion are determined and displayed based on a selected functional icon in the first portion; selecting an indicated group of symbols; selecting one of the symbols of the selected group as data to be entered into the device; and processing the selected symbol as an entered symbol (emphasis added).

Will teaches predictive text input including disambiguation for grouped symbols/characters. Specifically, Will teaches scrolling through a plurality of groups of symbols, so as to indicate one of the groups (Figs. 1A-1C, 4A-7B, 10A-10B and 12A-15 and Col. 2, lines 59-64 and Col. 5, line 65-Col. 7, line 20); selecting an indicated group of symbols (Figs. 1A-1C, 4A-7B, 10A-10B and 12A-15 and Col. 5, line 65-Col. 7, line 20); selecting one of the symbols of the selected group as data to be entered into the device (Figs. 14A-15 and Col. 14, line 1-Col. 15, line 62 teach disambiguation of a previously selected character group); and processing the selected symbol as an entered symbol (Figs. 14A-15. Although Will fails to expressly teach processing the selected symbol as an entered symbol, Examiner notes the processing is inherently performed in a system asking the for specific disambiguation input). It would have been obvious to one of ordinary skill in the art to modify the character strip including functional icons of Kraft in view of Official Notice to include the symbol/character groupings of Will to

increase the speed and efficiency of the input by reducing the amount of items in a scrollable menu (Will, Abstract and Col. 1, lines 62-65).

Kraft in view of Will teaches predictive text input including a character strip with functional icons, rotary input and symbol/character groupings. However, Kraft in view of Will fails to expressly teach the symbols/characters grouped as on an ITU-T keypad (emphasis added).

Examiner takes official notice that ITU-T keypad layouts are well known in the art. It would have been obvious to one of ordinary skill in the art to substitute the symbol and character groupings of an ITU-T keypad for the symbol/character groups of Kraft in view of Will. One would be motivated to make this change of interface layout because both layouts/groupings were known in the art and the results of the substitution of one for the other would have been predictable. Furthermore, Examiner notes that Will expressly suggests alternative groupings are possible, including those taught by standard telephone keypads (Col. 10, lines 11-12).

With respect to Claim 19, Kraft in view Will teaches an electronic device according to claim 18, discussed above, wherein the means for selecting one of the indicated groups of symbols and means for selecting one of the symbols are provided by the same mechanism (Kraft, Figs. 1 and 3-7 and Will, Figs. 1A-2, 4A-7B, 10A-10B and 12A-15. As discussed above, a rotary input device is used to make selections in a character prediction system as well as the character disambiguation system).

With respect to Claim 20, Kraft in view of Will teaches an electronic device according to claim 18, discussed above, wherein the means for selecting one of the symbols is configured to select one of the symbols using a character prediction engine (Will, Figs. 1A-2, 4A-7B, 10A-10B and 12A-15. As discussed above, Will teaches a rotary input device is used in conjunction with a character prediction engine to make selections in a character prediction system as well as the character disambiguation system).

The further limitations of Claims 21-22 are rejected for substantially the same reasons as Claims 4-5, discussed above.

With respect to Claim 23, Kraft in view of Will teaches an electronic device according to claim 22, discussed above, wherein the means for selecting one of the symbols is provided by the cylindrical input mechanism (Kraft, Figs. 1 and 3-7 and Will, Figs. 1A-2, 4A-7B, 10A-10B and 12A-15. As discussed above, a rotary input device is used to make selections in a character prediction system as well as the character disambiguation system).

With respect to Claim 24, Kraft teaches a method of entering data into an electronic device, comprising:

scrolling through a plurality of symbols on a character strip, the character strip comprising three portions (Figs. 3-7, Abstract and Col. 5, lines 29-41, Col. 5, line 66-

Col. 6, line 13, Col. 7, lines 15-57 and Col. 10, lines 12-34 teach scrolling through various character strips including functional icons, predictive text and symbols):

a first portion comprising functional symbols (Figs. 3-7, Abstract and Col. 7, lines 15-57, Col. 10, lines 12-34 and Col. 13, line 12-Col. 14, line 38. **Examiner notes Col. 10, lines 31-32 teach an exemplary character strip including a first portion with language dependent characters. Col. 7, lines 29-57 teach language dependent characters and special characters that are language dependent. Examiner notes there is also an option to enter a special character mode including, but not limited to, Greek letters. A reasonably broad interpretation of a functional symbol includes an item in a character strip to change the language. Examiner further notes Col. 6, lines 18-21 teach the character strip may include special functions**),

a second portion (Figs. 3-7, Abstract and Col. 7, lines 22-23, Col. 9, line 33-Col. 10, line 34 and Col. 13, line 12-Col. 14, line 38) comprising, for a first symbol to be entered by a user, the plurality of symbols (Examiner notes Col. 7, lines 22-23 teach an exemplary character strip with a second portion comprising a plurality of symbols. Col. 9, line 66-Col. 10, line 11 teach the first input does not include suggested next symbols) and, for a second symbol to be entered following entry of the first symbol by the user, at least one suggested next symbol (Examiner notes Col. 10, lines 31-32 teach an exemplary character strip including a second portion with most probable characters), and

a third portion comprising a plurality of other symbols (Figs. 3-7, Abstract and Col. 7, lines 15-57, Col. 10, lines 12-34 and Col. 13, line 12-Col. 14, line 38. **Examiner**

notes Col. 10, lines 31-32 teach an exemplary character strip including a third portion with other symbols including, but not limited to, characters, numbers and special symbols),

wherein the second portion and the plurality of other symbols in the third portion are determined and displayed based on a selected functional symbol in the first portion (Figs. 3-7, Abstract and Col. 5, lines 29-41, Col. 5, line 66-Col. 6, line 13, Col. 7, lines 15-57 and Col. 10, lines 12-34 teach word prediction including foreign languages. Examiner notes the predicted characters and special symbols are language dependent); and

selecting a symbol (Figs. 3-7, Abstract and Col. 5, lines 29-41, Col. 5, line 66-Col. 6, line 13, Col. 7, lines 15-57 and Col. 10, lines 12-34 teach selecting a symbol); and

However, Kraft fails to expressly teach wherein the functional symbols are icons (emphasis added) (Examiner notes Fig. 3, item 24 and Col. 6, lines 30-36 teach icons are used to represent other information).

Examiner takes official notice that icons and functional icons are well known in the art. It would have been obvious for one of ordinary skill in the art to substitute a functional icon for the functional symbols of Kraft. One would be motivated to make this change of user interface representation because both symbols and icons were known in the art and the results of the substitution of one for the other would have been predictable.

Kraft in view of Official Notice teaches predictive text input including a character strip with functional icons. However, Kraft fails to expressly teach selecting a grouping of symbols/characters. Specifically, Kraft fails to expressly teach scrolling through a plurality of logically arranged groups of symbols on a character strip, the symbols comprising characters grouped as on an ITU-T keypad, so as to indicate one of the groups, the character strip comprising three portions: a first portion comprising functional icons, a second portion comprising, for a first symbol to be entered by a user, the plurality of groups of symbols and, for a second symbold to be entered following entry of the first symbol by the user, at least one suggested next symbol, and a third portion comprising a plurality of other groups and symbols, wherein the plurality of the groups in the second portion and the plurality of other groups and symbols in the third portion are determined and displayed based on a selected functional icon in the first portion; selecting an indicated group of symbols; and selecting one of the symbols of the selected group as data to be entered into the device (emphasis added).

Will teaches predictive text input including disambiguation for logically arranged groups of symbols/characters. Specifically, Will teaches scrolling through a plurality of logically arranged groups of symbols, so as to indicate one of the groups (Figs. 1A-1C, 4A-7B, 10A-10B and 12A-15 and Col. 2, lines 59-64 and Col. 5, line 65-Col. 7, line 20); selecting an indicated group of symbols (Figs. 1A-1C, 4A-7B, 10A-10B and 12A-15 and Col. 5, line 65-Col. 7, line 20); and selecting one of the symbols of the selected group as data to be entered into the device (Figs. 14A-15 and Col. 14, line 1-Col. 15, line 62 teach disambiguation of a previously selected character group). It would have been

obvious to one of ordinary skill in the art to modify the character strip including functional icons of Kraft in view of Official Notice to include the logically arranged groups of symbol/characters of Will to increase the speed and efficiency of the input by reducing the amount of items in a scrollable menu (Will, Abstract and Col. 1, lines 62-65).

With respect to Claim 25, Kraft in view of Will teaches a method according to claim 24, discussed above further comprising the steps of:

subsequently determining, by a computer program within the device, one or more symbols as being likely to be selected next by a user (Will, Figs. 14A-15 and Col. 2, lines 59-64 and Col. 14, line1-Col. 15, line 62 teach disambiguation of previously selected character groups. Examiner notes the character disambiguation is performed by the text prediction engine to reduce the number of predictions); and

displaying the one or more symbols on a display screen of the electronic device as the at least one suggested next symbols (Will, Figs. 14A-15).

The further limitations of Claim 26 are rejected for substantially the same reasons as Claim 13, discussed above.

The further limitations of Claim 27 are rejected for substantially the same reasons as Claim 4, discussed above.

With respect to Claim 28, Kraft teaches an electronic device, comprising:

scrolling through a plurality of symbols on a character strip, the character strip comprising three portions (Figs. 3-7, Abstract and Col. 5, lines 29-41, Col. 5, line 66-Col. 6, line 13, Col. 7, lines 15-57 and Col. 10, lines 12-34 teach scrolling through various character strips including functional icons, predictive text and symbols):

a first portion comprising functional symbols (Figs. 3-7, Abstract and Col. 7, lines 15-57, Col. 10, lines 12-34 and Col. 13, line 12-Col. 14, line 38. **Examiner notes Col. 10, lines 31-32 teach an exemplary character strip including a first portion with language dependent characters. Col. 7, lines 29-57 teach language dependent characters and special characters that are language dependent. Examiner notes there is also an option to enter a special character mode including, but not limited to, Greek letters. A reasonably broad interpretation of a functional symbol includes an item in a character strip to change the language. Examiner further notes Col. 6, lines 18-21 teach the character strip may include special functions**),

a second portion (Figs. 3-7, Abstract and Col. 7, lines 22-23, Col. 9, line 33-Col. 10, line 34 and Col. 13, line 12-Col. 14, line 38) comprising, for a first symbol to be entered by a user, the plurality of symbols (Examiner notes Col. 7, lines 22-23 teach an exemplary character strip with a second portion comprising a plurality of symbols. Col. 9, line 66-Col. 10, line 11 teach the first input does not include suggested next symbols) and, for a second symbol to be entered following entry of the first symbol by the user, at least one suggested next

symbol (Examiner notes Col. 10, lines 31-32 teach an exemplary character strip including a second portion with most probable characters), and

a third portion comprising a plurality of other symbols (Figs. 3-7, Abstract and Col. 7, lines 15-57, Col. 10, lines 12-34 and Col. 13, line 12-Col. 14, line 38. **Examiner notes Col. 10, lines 31-32 teach an exemplary character strip including a third portion with other symbols including, but not limited to, characters, numbers and special symbols**),

wherein the second portion and the plurality of other symbols in the third portion are determined and displayed based on a selected functional symbol in the first portion (Figs. 3-7, Abstract and Col. 5, lines 29-41, Col. 5, line 66-Col. 6, line 13, Col. 7, lines 15-57 and Col. 10, lines 12-34 teach word prediction including foreign languages. Examiner notes the predicted characters and special symbols are language dependent); and

selecting the symbol (Figs. 3-7, Abstract and Col. 5, lines 29-41, Col. 5, line 66-Col. 6, line 13, Col. 7, lines 15-57 and Col. 10, lines 12-34 teach selecting the symbol); and

However, Kraft fails to expressly teach wherein the functional symbols are icons (emphasis added) (Examiner notes Fig. 3, item 24 and Col. 6, lines 30-36 teach icons are used to represent other information).

Examiner takes official notice that icons and functional icons are well known in the art. It would have been obvious for one of ordinary skill in the art to substitute a functional icon for the functional symbols of Kraft. One would be motivated to make this

change of user interface representation because both symbols and icons were known in the art and the results of the substitution of one for the other would have been predictable.

Kraft in view of Official Notice teaches a character strip including functional icons. However, Kraft fails to expressly teach the specific means for scrolling and selecting described in the specification as filed (emphasis added). Specifically, Kraft fails to describe a rotary mechanism that can be pressed downwards, in the direction towards the handset by pushing along its axis (Examiner notes the specific structure described in Figs. 2A-2B of the specification as filed can be distinguished from the roller key taught by Kraft).

Examiner takes official notice that cylindrical input devices that rotate about their axis and provide a selection input when pushed along its axis downwards towards the housing are well known in the art (hereinafter referred to as a "rotary input device"). It would have been obvious for one of ordinary skill in the art to substitute a rotary input device for the roller of Kraft providing the user with a cylindrical input mechanism that performs section when pushed along its axis. One would be motivated to make this change of input device because both input devices were known in the art and the results of the substitution of one for the other would have been predictable.

Kraft in view of Official Notice teaches predictive text input including a character strip with functional icons and a rotary input device. However, Kraft fails to expressly teach selecting a grouping of symbols/characters. Specifically, Kraft fails to expressly teach scrolling through a plurality of groups of symbols on a character strip, the symbols

comprising characters grouped as on an ITU-T keypad, so as to indicate one of the groups, the character strip comprising three portions: a first portion comprising functional icons, a second portion comprising, for a first symbol to be entered by a user, the plurality of groups of symbols and, for a second symbol to be entered following entry of the first symbol by the user, at least one suggested next symbol, and a third portion comprising a plurality of other groups and symbols, wherein the plurality of the groups in the second portion and the plurality of other groups and symbols in the third portion are determined and displayed based on a selected functional icon in the first portion; selecting an indicated group of symbols; and selecting one of the symbols of the selected group as data to be entered into the device (emphasis added).

Will teaches predictive text input including disambiguation for grouped symbols/characters. Specifically, Will teaches scrolling through a plurality of groups of symbols, so as to indicate one of the groups (Figs. 1A-1C, 4A-7B, 10A-10B and 12A-15 and Col. 2, lines 59-64 and Col. 5, line 65-Col. 7, line 20); selecting an indicated group of symbols (Figs. 1A-1C, 4A-7B, 10A-10B and 12A-15 and Col. 5, line 65-Col. 7, line 20); and selecting one of the symbols of the selected group as data to be entered into the device (Figs. 14A-15 and Col. 14, line 1-Col. 15, line 62 teach disambiguation of a previously selected character group). It would have been obvious to one of ordinary skill in the art to modify the character strip including functional icons of Kraft in view of Official Notice to include the symbol/character groupings of Will to increase the speed and efficiency of the input by reducing the amount of items in a scrollable menu (Will, Abstract and Col. 1, lines 62-65).

With respect to Claim 29, Kraft in view of Will teaches an electronic device according to claim 28, discussed above, further comprising:

means for determining one or more symbols as being likely to be selected next by the user (Will, Figs. 1-2, 4A-7B, 10A-10B and 12A-15 and Col. 12, line 30-Col. 13, line 45 teach a text prediction system); and

a display screen for displaying the one or more symbols as the at least one suggested next symbol (Will, Figs. 1A-2, 4A-7B, 10A-10B and 12A-15 and Col. 8, lines 17-20 teach a display screen).

The further limitations of Claim 30 are rejected for substantially the same reasons as Claim 18, discussed above.

With respect to Claim 31, Kraft in view of Will teaches an electronic device according to claim 28, discussed above, wherein the means for selecting one of the indicated groups of symbols and means for selecting one of the symbols are provided by the same mechanism (Kraft, Figs. 1 and 3-7 and Will, Figs. 1A-2, 4A-7B, 10A-10B and 12A-15. As discussed above, a rotary input device is used to make selections in a character prediction system as well as the character disambiguation system).

With respect to Claim 32, Kraft in view of Will teaches an electronic device according to claim 28, discussed above, wherein the means for selecting one of the

symbols is configured to select one of the symbols using a character prediction engine (Will, Figs. 1A-2, 4A-7B, 10A-10B and 12A-15. As discussed above, Will teaches a rotary input device is used in conjunction with a character prediction engine to make selections in a character prediction system as well as the character disambiguation system).

The further limitations of Claim 33 are rejected for substantially the same reasons as Claim 4, discussed above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANTONIO XAVIER whose telephone number is 571-270-7688. The examiner can normally be reached on M-F 6:30am-12:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amare Mengistu can be reached on 571-272-7674. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. X./
Examiner, Art Unit 2629

/Amare Mengistu/

Supervisory Patent Examiner, Art Unit 2629